RETINOPTHY-DEPENDENT QUALITY OF LIFE QUESTIONNAIRE (RETDQOL): PSYCHOMETRIC DEVELOPMENT

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AIMS To develop the individualised RetDQoL, which includes 2 overview items (present
QoL and retinopathy-specific QoL), 26 domain-specific items and an open-ended question
about any other effects on QoL. The design was based on the widely used ADDQoL with
specific item content determined by 44 in-depth interviews in the UK and Germany.

METHODS 207 German patients with diabetic retinopathy (DR) were included. Principal
components analysis identified factor structure; Cronbach's alpha assessed internal
consistency. To obtain an average weighted impact (AWI) score, impact and importance
ratings for each applicable domain-specific item were multiplied, summed and the sum
divided by the N of applicable domains. Construct validity was examined by testing
correlations between overview items and AWI and expected relationships of overview
items and AWI with visual acuity (VA), stage of DR (ranging from non-proliferative to
proliferative), additional impact of macular oedema and SF-12 subscales. Content validity
was explored using the open-ended question.

RESULTS A forced one-factor solution without 'working life' (applicable to n=55) showed
high reliability (alpha=0.96). Worse VA was associated with worse present QoL and
retinopathy-specific QoL and more negative AWI (all p<0.001). Proliferative DR was
associated with worse retinopathy-specific QoL and more negative AWI (both p<0.001)
than non-proliferative. Macular oedema was associated with worse present QoL (p<0.01),
worse retinopathy-specific QoL (p<0.05) and more negative AWI (p<0.01). SF-12
subscales correlated with overview items and AWI (r:0.22-0.54, all p<0.001). As expected,
AWI correlated more strongly with retinopathy-specific QoL (r=0.71) than with present QoL
(r=0.28, both p<0.001). Employed people had less negative AWI (p<0.05) regardless of
VA. For 6 domains, >60% of patients reported no impact. Open-ended question responses
(n=12) mainly stressed existing items; no additions were needed.

CONCLUSIONS The RetDQoL is a reliable and valid measure of the impact of DR on
individual's QoL. It may usefully be shortened if findings are confirmed cross-culturally.